Database code status

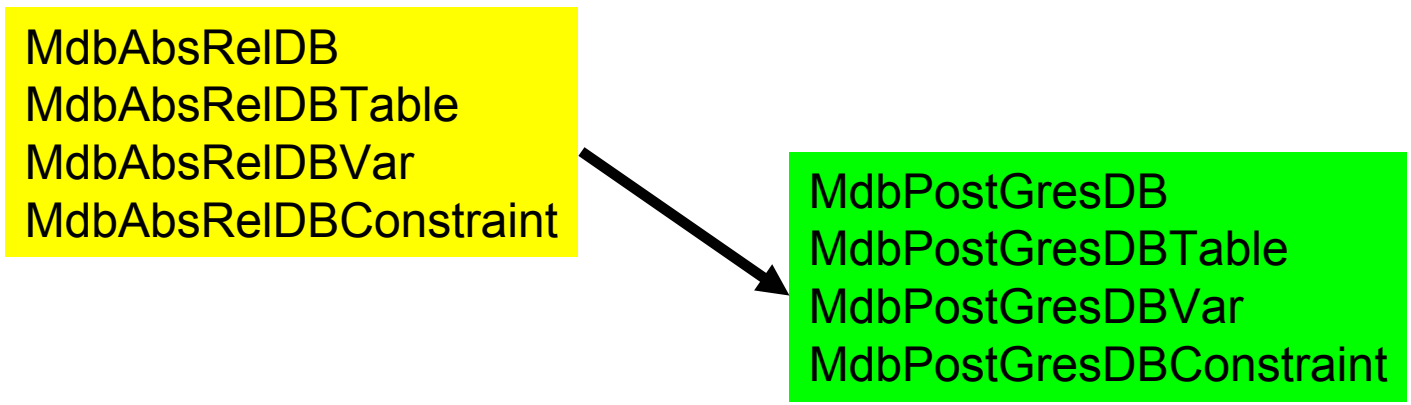
- Database technology = PostgreSQL
  - Freely available
  - Collaboration + lab experience using

- Needed to build tools to ease access for MIPP specific tasks
  - Online
  - Offline (this talk)
  - Standalone db queries

- Issues such as access/security and how the offline ← → online worlds talk to each other

Lowest level interface code for offline

- Classes that implement basic relational database interface commands with more user friendly code are in place
  - Set of abstract classes ←→ PostGres specific classes
    - PostGres provided C++ interface communicates with db via passing strings back and forth.
    - These classes define the allowed subset of SQL commands/data types/etc and handle the string conversions



- PostGres specific code is exposed to only one class (MdbDatabase)
  - "Easy" to change underlying database if needed.

Database “variable” types

- Currently implemented types
  - Strings
  - Floats and 1-Dim. arrays of floats
  - Integers and 1-Dim arrays of integers
  - SQL timestamps (Month/day/year/hour/minute/second)
    - Implemented to be GMT.

- Other needed variable types?

User level table class

- Hopefully a finite number of types of tables desired. Implement generic columns and search capabilities in base classes.
  - "Predefined" database queries

- MdbTableRunSubRun class (90% of all MIPP use cases?):
  - Columns for
    - min/max run
    - min/max subrun
    - time at which row was added to the database
    - Add "data" columns in derived classes
  - Search defined on above quantities.

Conclusions

- Basic structure for offline in place
- Online = java interface to db instead (so immediate demand moved elsewhere).

- Need another user feedback to know where the bugs /missing features are at this point.
  - Recipe on offline web pages